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Access DB#

66458

## SEARCH REQUEST FORM

Scientific and Technical Information Center

(STIC)

Requester's Full Name: Taylor Victor Oh Examiner #: 76066 Date: 5/19/02  
Art Unit: 1625 Phone Number 305-0809 Serial Number: 09/592,254  
Mail Box and Bldg/Room Location: CM1 6806 Results Format Preferred (circle): PAPER DISK E-MAIL

3DOLV  
If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*  
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Fluorinated OligourethanesInventors (please provide full names): Stefano TurriEarliest Priority Filing Date: 06/11/1999

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

claims are attached at the back, please find a method for films having hydro and oil repellent properties by applying dispersion of fluorinated oligourethanes

POINT OF CONTACT:  
PAUL SCHULWITZ  
TECHNICAL INFO. SPECIALIST  
CM1 6806 TEL. (703) 305-1954

## STAFF USE ONLY

Searcher: Paul Schulwitz

Searcher Phone #: \_\_\_\_\_

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: 5/13Date Completed: 5/16Searcher Prep & Review Time: 120

Clerical Prep Time: \_\_\_\_\_

Online Time: \_\_\_\_\_

## Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) ✓

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

## Vendors and cost where applicable

STN ✓

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

=&gt; d que

L1 STR

N=C=O

1 2 3

## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

## STEREO ATTRIBUTES: NONE

L2 85788 SEA FILE=REGISTRY SSS FUL L1

L3 405 SEA FILE=REGISTRY ABB=ON PLU=ON L2 AND PETH/PCT AND F&gt;1

L4 STR

G1^Ak^Q

1 2 3

VAR G1=OH/SH

## NODE ATTRIBUTES:

CONNECT IS E2 RC AT 2

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

## STEREO ATTRIBUTES: NONE

L6 252 SEA FILE=REGISTRY SUB=L3 SSS FUL L4

L11 691 SEA FILE=REGISTRY ABB=ON PLU=ON 9004-74-4/CRN

L12 5 SEA FILE=REGISTRY ABB=ON PLU=ON L11 AND L3

L13 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

L14 134 SEA FILE=HCAPLUS ABB=ON PLU=ON L6

L15 12 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (OIL OR WATER) (5A) (REP  
EL? OR PROOF?)

L17 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND CHARG?

L18 15 SEA FILE=HCAPLUS ABB=ON PLU=ON L15 OR L17

L19 17 SEA FILE=HCAPLUS ABB=ON PLU=ON L18 OR L13

L13 → claim 17(b) =  $(X_0 = OH, b = 1, R_1^A = R_2^A = H, Y_0 = -CH_2O-(CH_2CH_2O)_n-CH_3)$

L18 → <sup>more</sup> broadly defined claim 17(b)

L13 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:551207 HCAPLUS

DN 135:277913

TI Hydrogels with Controlled, Surface Erosion Characteristics from Self-Assembly of Fluoroalkyl-Ended Poly(ethylene glycol)

AU Tae, Giyoong; Kornfield, Julia A.; Hubbell, Jeffrey A.; Johannsmann, Diethelm; Hogen-Esch, Thieo E.

CS Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA

SO Macromolecules (2001), 34(18), 6409-6419

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB PEG (mol. wt. = 6k, 10k, and 20k g/mol) terminated at both ends by hydrophobic fluoroalkyl segments  $-(CH_2)_2C_nF_{2n+1}$  (where  $n = 6, 8, \text{ or } 10$ ), was synthesized and demonstrated to self-assemble into hydrogels with phase behavior and mech. and erosion properties that can be systematically varied by mol. design. With increasing fluoroalkyl length relative to PEG length, the phase behavior of these polymers in aq. soln. changes from the single-phase behavior of familiar associative thickeners, to sol-gel coexistence, to pptn. For those polymers that exhibit sol-gel coexistence, the equil. gel concn. (or swelling ratio of the gel phase) and the modulus of the gel phase are governed by the length of the PEG midblock, whereas the relaxation time is detd. by the hydrophobe length. The erosion characteristics of these hydrogels correlate with their phase behavior. The gels of sol-gel coexisting species exhibit surface erosion in an open system with a slow dissoln. rate controlled by the end-group length; in contrast, hydrogels from polymers that show single-phase behavior exhibit bulk erosion that is relatively fast. Therefore, the mol. structure of this class of polymers produces hydrogels whose mech. and erosion properties can be tailored for desired applications. Based on the established biocompatibility of PEG, the degree to which the characteristics of the gel phases can be tailored, and the surface erosion characteristics that can be achieved, these materials might have applications in implantable drug-release depots.

IT 364038-39-1P 364038-40-4P 364038-41-5P

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(hydrogels with controlled surface erosion characteristics of PEG with fluoroalkyl end groups)

RN 364038-39-1 HCAPLUS

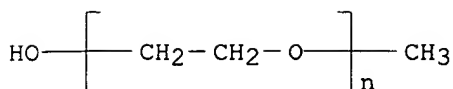
CN 1-Octanol, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-, adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

CCI PMS

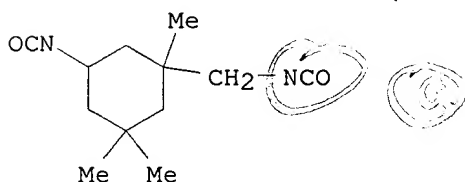


Chain 17 (15)

CM 2

CRN 4098-71-9

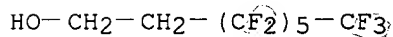
CMF C12 H18 N2 O2



CM 3

CRN 647-42-7

CMF C8 H5 F13 O



RN 364038-40-4 HCAPLUS

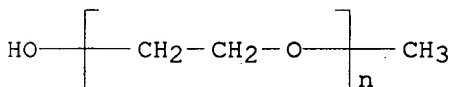
CN 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluoro-, adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

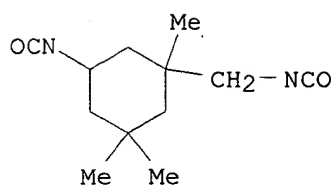
CCI PMS



CM 2

CRN 4098-71-9

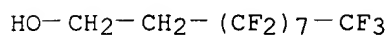
CMF C12 H18 N2 O2



CM 3

CRN 678-39-7

CMF C10 H5 F17 O



RN 364038-41-5 HCAPLUS

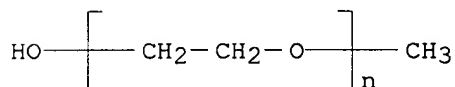
CN 1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuoro-, adduct with 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane and .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

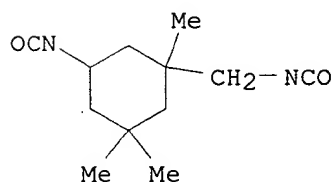
CCI PMS



CM 2

CRN 4098-71-9

CMF C12 H18 N2 O2



CM 3

CRN 865-86-1

CMF C12 H5 F21 O

HO-CH<sub>2</sub>-CH<sub>2</sub>-(CF<sub>2</sub>)<sub>9</sub>-CF<sub>3</sub>

RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ~~ANSWER 2 OF 3~~ HCAPLUS COPYRIGHT 2002 ACS

AN 1994:511614 HCAPLUS

DN 121:111614

TI Aqueous polyurethane dispersions for lustering coating compositions

IN Masuda, Takeshi; Matsumoto, Yasuhiro

PA Dainippon Ink & Chemicals, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

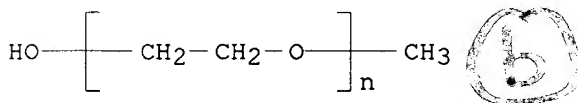
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06093234	A2	19940405	JP 1992-244724	19920914
AB	Perfluoroalkyl (meth)acrylates and comonomers are radically polymd. in the presence of chain-transfer agents contg. 2 OH groups and 1 SH group to give macromonomers, treated with long-chained polyhydroxy compds. and org. diisocyanates, and dispersed in aq. media to prep. lustering compns. Thus, a polyurethane was prepd. from polytetramethylene glycol, 5:5 Me methacrylate-perfluorooctylethyl acrylate telomer with thioglycerin, dimethylolpropionic acid, and TDI.				
IT	157122-28-6				
	RL: USES (Uses)				
	(aq. dispersions, for lustering agents)				
RN	157122-28-6 HCAPLUS				
CN	Hexanedioic acid, polymer with 1,6-hexanediol, 3-hydroxy-2-(hydroxymethyl)-2-methylpropanoic acid, 3-mercapto-1,2-propanediol telomer with methyl 2-methyl-2-propenoate and 2-[[methyl(tridecafluorohexyl)amino]sulfonyl]ethyl 2-propenoate, 1,1'-methylenebis[4-isocyanatobenzene] and .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)				

CM 1

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

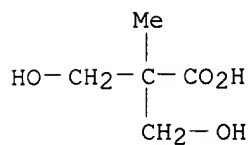
CCI PMS



CM 2

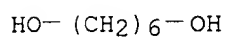
CRN 4767-03-7

CMF C5 H10 O4



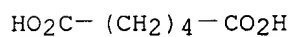
CM 3

CRN 629-11-8  
CMF C6 H14 O2



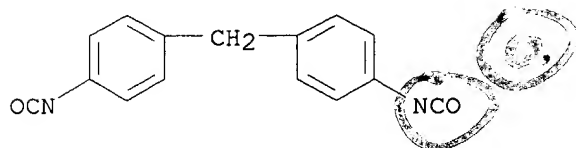
CM 4

CRN 124-04-9  
CMF C6 H10 O4



CM 5

CRN 101-68-8  
CMF C15 H10 N2 O2

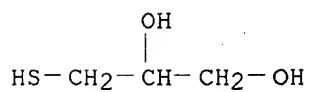


CM 6

CRN 157122-27-5  
CMF (C12 H10 F13 N O4 S . C5 H8 O2)x . C3 H8 O2 S

CM 7

CRN 96-27-5  
CMF C3 H8 O2 S



CM 8

CRN 90825-27-7

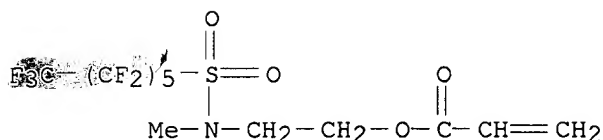
CMF (C12 H10 F13 N O4 S . C5 H8 O2)x

CCI PMS

CM 9

CRN 67584-57-0

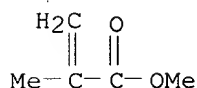
CMF C12 H10 F13 N O4 S



CM 10

CRN 80-62-6

CMF C5 H8 O2



L13 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS

AN 1973:443623 HCAPLUS

DN 79:43623

TI Treating fibers and fabric with hybrid polymers

IN Sherman, Patsy O.

PA Minnesota Mining and Manufg. Co.

SO U.S., 22 pp. Division of U.S. 3,574,791

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3728151	A	19730417	US 1970-57884	19700617
	US 3574791	A	19710413	US 1968-698016	19680115
PRAI	US 1967-614925		19670209		
	US 1968-698016		19680115		

AB Durable water resistance, oily stain resistance, and oily stain removal properties were achieved on resin-finished textiles by treatment with block polymers having oleophobic and hydrophobic properties in air and hydrophilic and oleophobic properties in aq. environments without interfering with the improvements produced by the resins. Thus, 2.5 g 2-[N-ethyl(perfluorooctyl)sulfonamido]ethyl methacrylate and 2.5 g tetraethylene glycol dimethacrylate-H2S prepolymer were polymd. to yield



2-[N-ethyl(perfluorooctyl)sulfonamido]ethyl methacrylate-hydrogen sulfide-tetraethylene glycol dimethacrylate block copolymer [40957-64-0] which was dissolved in methyl isobutyl ketone and padded on a cotton-polyester fabric which had been permanent press-finished with dimethyloldihydroxyethyleneurea to give a fabric with good stain release and repellency after 5 launderings. Numerous other block copolymers were synthesized and used.

IT 39421-21-1

RL: USES (Uses)

(block, cellulosic textiles treated with, for improved soil release, soil repellancy and waterproofing)

RN 39421-21-1 HCAPLUS

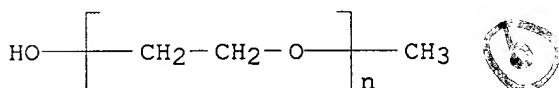
CN 2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2,4-diisocyanatomethylbenzene, 2-hydroxypropyl 2-methyl-2-propenoate and .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

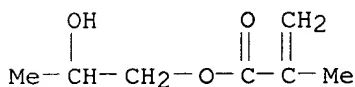
CCI PMS



CM 2

CRN 923-26-2

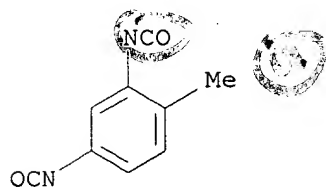
CMF C7 H12 O3



CM 3

CRN 584-84-9

CMF C9 H6 N2 O2



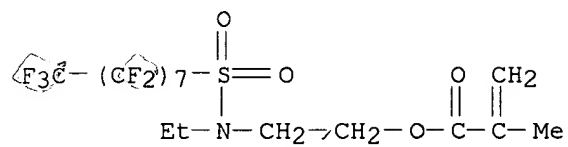
09/592,254

May 16, 2002

CM 4

CRN 376-14-7

CMF C16 H14 F17 N O4 S



118 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1998:788973 HCAPLUS

DN 130:96820

TI Moisture-permeable waterproof coated fabrics and manufacture thereof

IN Furuta, Tsunekatsu; Kamemaru, Kenichi

PA Unitika Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

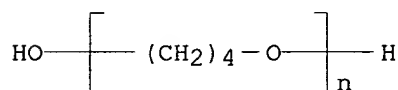
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10325081	A2	19981208	JP 1997-130737	19970521
AB	The title fabrics have a polyurethane-based porous resin layer contg. honeycomb skin core structure voids with long diam. 1-40 .mu.m, area ratio 50-70%, and (2-10) x 103 voids/mm2 and microvoids with long diam. .ltoreq.1 .mu.m, area ratio 1-20%, and (1-30) x 105 voids/mm2 in the cross section direction and also have water pressure resistance 0.6-2.5 kg/cm2 and moisture permeability 8000-12000 g/m2-24 h. PTMG-HMDI prepolymer was modified with hydroxy-terminated PVDF and used with Lackskin 1740-29B polyurethane contg. Aerosil R-972 and Resamine X-100 on a dyed and prefinished nylon taffeta, followed by coating with Asahiguard LS-317 water repellent.				
IT	218461-68-8P				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (moisture-permeable waterproof coated fabrics and manuf. thereof)				
RN	218461-68-8 HCAPLUS				
CN	Poly(oxy-1,4-butanediyl), .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1-difluoroethene and 1,6-diisocyanatohexane (9CI) (CA INDEX NAME)				

CM 1

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

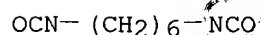
CCI PMS



CM 2

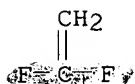
CRN 822-06-0

CMF C8 H12 N2 O2



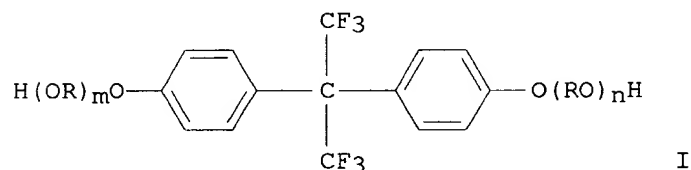
CM 3

CRN 75-38-7  
CMF C2 H2 F2



L18 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2002 ACS  
AN 1995:769757 HCAPLUS  
DN 123:156333  
TI Triboelectric **charging** materials used for electrophotography and  
electrostatic printing  
IN Sasaki, Fumihiro; Minamitani, Toshiki  
PA Ricoh Kk, Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06051564	A2	19940225	JP 1992-202426	19920729
GI					



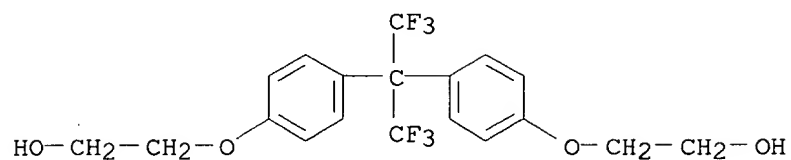
AB The title materials are characterized by the surface layer contg. at least a polyester prepd. from I (R = ethylene, propylene; m.gto req.0; n.gto req.0) and bis(4-hydroxyphenyl)sulfone. The title materials are used for carriers, sleeves, doctor blades, and other materials used in a pos. **charging** process. The materials are esp. suitable for **charging** color toners.

IT **154195-62-7P**  
RL: DEV (Device component use); IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(triboelec. **charging** material for electrophotog. and electrostatic printing app.)

RN 154195-62-7 HCAPLUS  
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,6-diisocyanatohexane, 4,4'-sulfonylbis[phenol] and 2,2'-[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis(4,1-phenyleneoxy)]bis[ethanol] (9CI) (CA INDEX NAME)

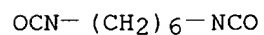
CM 1

CRN 47601-63-8  
 CMF C19 H18 F6 O4



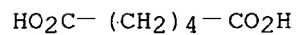
CM 2

CRN 822-06-0  
 CMF C8 H12 N2 O2



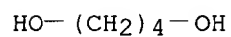
CM 3

CRN 124-04-9  
 CMF C6 H10 O4



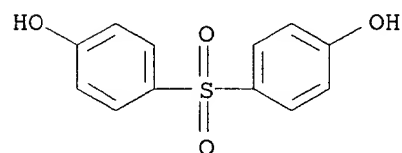
CM 4

CRN 110-63-4  
 CMF C4 H10 O2



CM 5

CRN 80-09-1  
 CMF C12 H10 O4 S

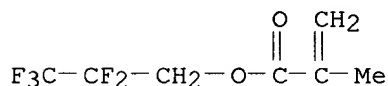


L18 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1994:484809 HCAPLUS  
 DN 121:84809  
 TI Fluorine-containing thermoplastic polyurethanes  
 IN Kanetani, Koji  
 PA Nippon Polyurethane Kogyo Kk, Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06093075	A2	19940405	JP 1992-260682	19920903
	JP 3265562	B2	20020311		
AB	The thermoplastic polyurethanes with good surface lubricity are prepd. by treating polyisocyanates, chain-extenders, and modified diols obtained by reacting 100 parts unsatd. group-contg. diols (av. mol. wt. 500-5000) with 2-200 parts F-contg. vinyl monomers. Thus, 300 parts diol [prepd. from adipic acid 1216, 1,4-butanediol (I) 952, and fumaric acid 136 parts] and 120 parts 2,2,3,3,3-pentafluoropropyl methacrylate were treated to obtain a modified diol, 280 parts of which was polymd. with 27 parts I and 100 parts MDI at 120.degree. for 1 h to give a polyurethane. A film prepd. from the polyurethane showed H2O contact angle 103.degree..				
IT	<b>156639-43-9P</b>				
	RL: PREP (Preparation) (prepn. of, with good surface lubricity and <b>water repellency</b> )				
RN	156639-43-9 HCAPLUS				
CN	2-Butenedioic acid (2Z)-, polymer with 1,4-butanediol, .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl), 1,1'-methylenebis[4-isocyanatobenzene] and 2,2,3,3,3-pentafluoropropyl 2-methyl-2-propenoate, block (9CI) (CA INDEX NAME)				

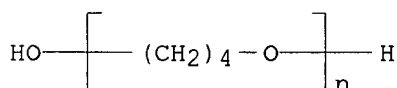
CM 1

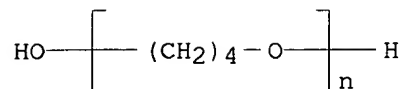
CRN 45115-53-5  
 CMF C7 H7 F5 O2



CM 2

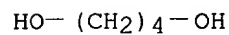
CRN 25190-06-1  
 CMF (C4 H8 O)n H2 O  
 CCI PMS





CM 3

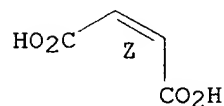
CRN 110-63-4  
CMF C4 H10 O2



CM 4

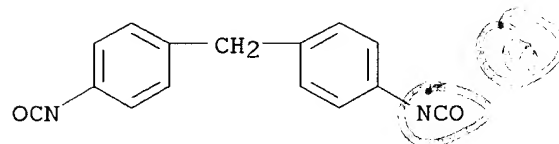
CRN 110-16-7  
CMF C4 H4 O4  
CDES 2:Z

Double bond geometry as shown.



CM 5

CRN 101-68-8  
CMF C15 H10 N2 O2



L18 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2002 ACS  
AN 1994:437607 HCAPLUS  
DN 121:37607  
TI Manufacture of waterproofed moisture-permeable fabrics  
IN Enomoto, Masaho; Ogasawara, Kenichi  
PA Seiko Kasei Kk, Japan  
SO Jpn. Kokai Tokkyo Koho, 6 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 06002278 A2 19940111 JP 1992-184415 19920617  
 JP 3165509 B2 20010514

AB Fabrics are coated on one or both sides with a mixt. of a soln. of F-contg. polyurethanes in a water-miscible org. solvent (A) and a cellulose deriv., immersed in H2O for extn. of A, and dried. A nylon 6 taffeta was padded with an aq. soln. of a F-contg. **water repellent**, heated at 160.degree., coated with a DMF soln. of F-contg. polyurethane [prepd. from poly(butylene ethylene adipate) diol 300, ethylene glycol 25, Me methacrylate-Viscoat 17 FM (1H,1H,2H,2H-heptadecafluorodecyl methacrylate)-2-hydroxypropyl methacrylate copolymer 24, and MDI 125 parts], Ca-398-3 (cellulose acetate), and Coronate EH to coating wt. 200 g/m2, immersed in an aq. coagulating bath at 20.degree., subsequently immersed in H2O at 50.degree. for extn. of DMF, dried, padded with an aq. soln. of an F-contg. **water-repellent**, and dried. The fabric showed resistance to hydrostatic pressure 10,500 mm initially and 7600 mm after 10 washings and water vapor transmission 11,000 g/m2-24 h.

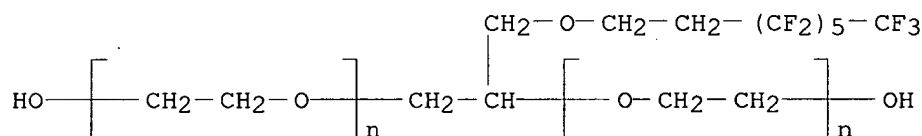
IT **155732-19-7 155732-21-1**  
 RL: USES (Uses)  
 (waterproofing agents contg. cellulose acetate and, moisture-permeable, for fabrics)

RN 155732-19-7 HCAPLUS

CN Hexanedioic acid, polymer with 1,4-butanediol, 1,2-ethanediol, 1,1'-methylenebis[4-isocyanatobenzene] and .alpha.,.alpha.'-[1-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy)methyl]-1,2-ethanediyl]bis[.omega.-hydroxypoly(oxy-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

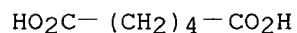
CM 1

CRN 134293-07-5  
 CMF (C2 H4 O)n (C2 H4 O)n C11 H11 F13 O3  
 CCI PMS



CM 2

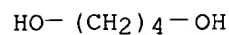
CRN 124-04-9  
 CMF C6 H10 O4



CM 3

CRN 110-63-4  
 CMF C4 H10 O2

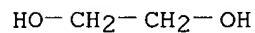




CM 4

CRN 107-21-1

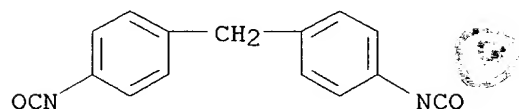
CMF C2 H6 O2



CM 5

CRN 101-68-8

CMF C15 H10 N2 O2



RN 155732-21-1 HCAPLUS

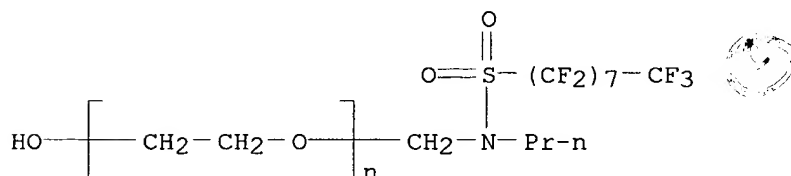
CN Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 1,2-ethanediol, .alpha.-[[[(heptadecafluorooctyl)sulfonyl]propylamino]methyl]-.omega.-hydroxypoly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl), 1,1'-methylenebis[4-isocyanatocyclohexane] and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 155732-20-0

CMF (C2 H4 O)<sub>n</sub> C12 H10 F17 N O3 S

CCI PMS

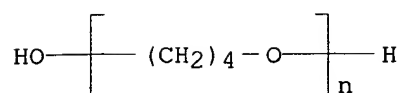


CM 2

CRN 25190-06-1

CMF (C4 H8 O)<sub>n</sub> H2 O

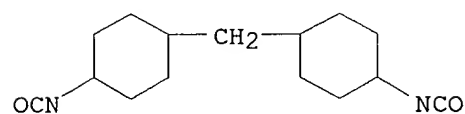
CCI PMS



CM 3

CRN 5124-30-1

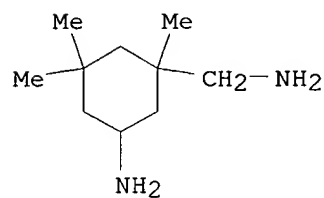
CMF C15 H22 N2 O2



CM 4

CRN 2855-13-2

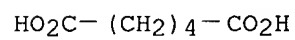
CMF C10 H22 N2



CM 5

CRN 124-04-9

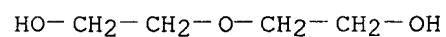
CMF C6 H10 O4



CM 6

CRN 111-46-6

CMF C4 H10 O3



CM 7

CRN 107-21-1  
CMF C2 H6 O2

HO-CH<sub>2</sub>-CH<sub>2</sub>-OH

L18 ANSWER 5 OF 15, HCAPLUS COPYRIGHT 2002 ACS

AN 1994:232006 HCAPLUS

DN 120:232006

TI Negatively **charging** toners for developing electrostatic image

IN Minamitani, Toshiki; Suzuki, Masanori

PA Ricoh Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

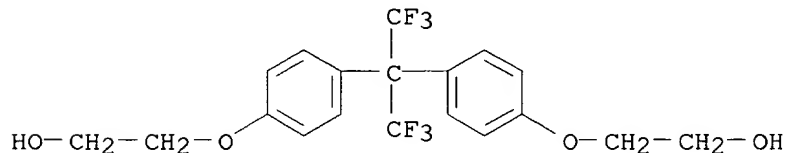
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05265256	A2	19931015	JP 1992-62063	19920318
AB	The title toners contain, as a <b>charge</b> -controlling agent, a polyester prepolymer from H(OZ) <sub>m</sub> O(p-C <sub>6</sub> H <sub>4</sub> )C(CF <sub>3</sub> ) <sub>2</sub> (p-C <sub>6</sub> H <sub>4</sub> )O(ZO) <sub>n</sub> H (I; Z = ethylene, propylene; m, n > 0) and/or bis(4-hydroxyphenyl)sulfone (II) as an alc. component. The toners show good <b>charging</b> properties, sharp triboelec. <b>charge</b> distribution, and improved environmental stability. Thus, a polyester from I (Z = ethylene, m = n = 1), II, hexamethylene diisocyanate, adipic acid, and butylene glycol, styrene-2-ethylhexyl acrylate copolymer, polypropylene, and C.I. Pigment Blue 15 (pigment) were kneaded and pulverized to give a toner, which was mixed with a carrier to give a developer.				
IT	<b>154195-62-7</b>				
	RL: USES (Uses)				
	(charge-controlling agent, electrophotog. neg.- <b>charging</b> toner contg.)				
RN	154195-62-7 HCAPLUS				
CN	Hexanedioic acid, polymer with 1,4-butanediol, 1,6-diisocyanatohexane, 4,4'-sulfonylbis[phenol] and 2,2'-[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis(4,1-phenyleneoxy)]bis[ethanol] (9CI) (CA INDEX NAME)				

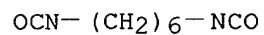
CM 1

CRN 47601-63-8

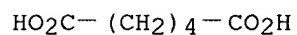
CMF C19 H18 F6 O4



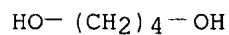
CM 2

CRN 822-06-0  
CMF C8 H12 N2 O2

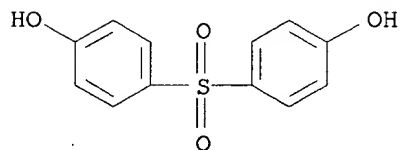
CM 3

CRN 124-04-9  
CMF C6 H10 O4

CM 4

CRN 110-63-4  
CMF C4 H10 O2

CM 5

CRN 80-09-1  
CMF C12 H10 O4 S

L18 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1992:614457 HCAPLUS

DN 117:214457

TI Manufacture of coated fabrics with excellent water resistance and moisture permeability

IN Namaki, Ryoaburo; Enomoto, Masaho

PA Seikoh Chemicals Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

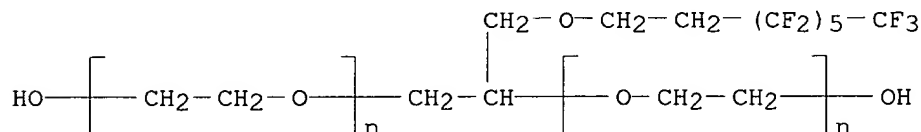
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04163373	A2	19920608	JP 1990-284736	19901022
AB	The title fabrics with soft handle are manufd. by coating hydrophilic org. solvent solns. contg. reaction products of polyurethanes and vinylidene fluoride polymers on .gtoreq.1 side of fiber substrates, extg. of the solvents, and drying. Thus, reacting OH-terminated ethylene butylene adipate 350, ethylene glycol 34, OH-terminated adipic acid-ethylene glycol-fumaric acid-itaconic acid copolymer 50, 3-(2-perfluorohexyl)ethoxy-1,2-dihydroxypropane ethylene oxide adduct 46, and MDI 175 parts in DMF under heating gave a polyurethane soln., 100 parts of which was stirred with 40 parts 20% soln. of Cefral Soft G 180 in DMF and 0.4 part Bz2O2 at 100.degree. for 8 h to give a soln (A). A <b>water repellent</b> -treated nylon 6 taffeta was coated with a soln. contg. A 100, Coronate EH 1, and DMF 20 parts, immersed in water at 20.degree. for 1 h, extd. of DMF in water at 50.degree. for 10 min, dried, padded with an aq. <b>water repellent</b> emulsion, and treated at 160.degree. for 3 min to give a coated fabric with water pressure resistance (JIS L-1079) 3000 mm H2O/cm2 and moisture permeability (JIS Z-0208) 8500 g/m2-24-h.				
IT	<b>144124-46-9P 144306-47-8DP</b> , polymers with urethane rubbers and polyisocyanates <b>144327-64-0P</b> RL: IMF (Industrial manufacture); PREP (Preparation) (coatings, prepn. of, waterproofing, moisture-permeable, for fabrics)				
RN	144124-46-9 HCAPLUS				
CN	Hexanedioic acid, polymer with butanediol, (2E)-2-butanedioic acid, Coronate EH, 1,1-difluoroethene, 1,2-ethanediol, 1,1,2,3,3,3-hexafluoro-1-propene, 1,1'-methylenebis[4-isocyanatobenzene], methylenebutanedioic acid and .alpha.,.alpha.'-[1-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy)methyl]-1,2-ethanediyl]bis[.omega.-hydroxypoly(oxy-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)				
CM	1				
CRN	134293-07-5				
CMF	(C2 H4 O)n (C2 H4 O)n C11 H11 F13 O3				
CCI	PMS				



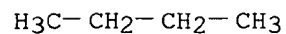
CM 2

CRN 86472-86-8  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

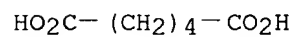
CM 3

CRN 25265-75-2  
 CMF C4 H10 O2  
 CCI IDS  
 CDES 8:ID

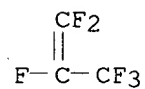


2 ( D1-OH )

CM 4  
 CRN 124-04-9  
 CMF C6 H10 O4

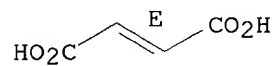


CM 5  
 CRN 116-15-4  
 CMF C3 F6

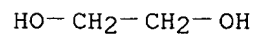


CM 6  
 CRN 110-17-8  
 CMF C4 H4 O4  
 CDES 2:E

Double bond geometry as shown.



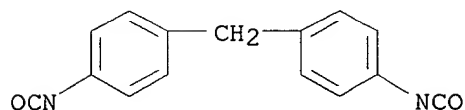
CM 7  
 CRN 107-21-1  
 CMF C2 H6 O2



CM 8

CRN 101-68-8

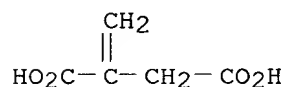
CMF C15 H10 N2 O2



CM 9

CRN 97-65-4

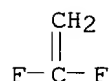
CMF C5 H6 O4



CM 10

CRN 75-38-7

CMF C2 H2 F2



RN 144306-47-8 HCAPLUS

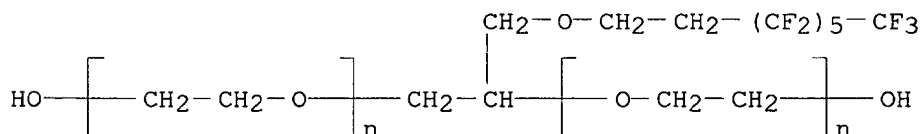
CN Hexanedioic acid, polymer with butanediol, (2E)-2-butenedioic acid, 1,1-difluoroethene, 1,2-ethanediol, 1,1,2,3,3,3-hexafluoro-1-propene, 1,1'-methylenebis[4-isocyanatobenzene], methylenebutanedioic acid and .alpha.,.alpha.'-[1-[[[(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl)oxy]methyl]-1,2-ethanediyl]bis[.omega.-hydroxypoly(oxy-1,2-ethanediyl)]] (9CI) (CA INDEX NAME)

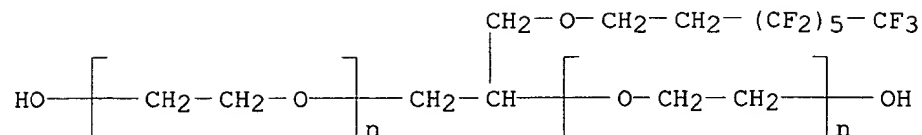
CM 1

CRN 134293-07-5

CMF (C2 H4 O)n (C2 H4 O)n C11 H11 F13 O3

CCI PMS





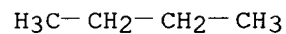
CM 2

CRN 25265-75-2

CMF C4 H10 O2

CCI IDS

CDES 8:ID

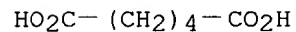


2 ( D1-OH )

CM 3

CRN 124-04-9

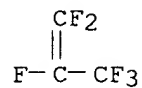
CMF C6 H10 O4



CM 4

CRN 116-15-4

CMF C3 F6



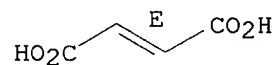
CM 5

CRN 110-17-8

CMF C4 H4 O4

CDES 2:E

Double bond geometry as shown.

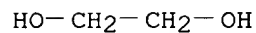




CM 6

CRN 107-21-1

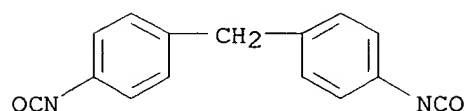
CMF C2 H6 O2



CM 7

CRN 101-68-8

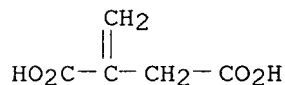
CMF C15 H10 N2 O2



CM 8

CRN 97-65-4

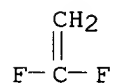
CMF C5 H6 O4



CM 9

CRN 75-38-7

CMF C2 H2 F2



RN 144327-64-0 HCAPLUS

CN Hexanedioic acid, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, Coronate EH, 1,1-difluoroethene, 1,2-ethanediol, 2-hydroxyethyl 2-methyl-2-propenoate, 1,1'-methylenebis[4-isocyanatocyclohexane], 2,2'-oxybis[ethanol] and 1,3-propanediol (9CI) (CA INDEX NAME)

CM 1

CRN 86472-86-8

CMF Unspecified

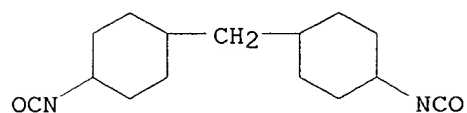
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 5124-30-1

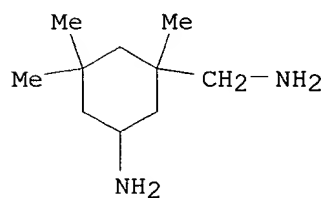
CMF C15 H22 N2 O2



CM 3

CRN 2855-13-2

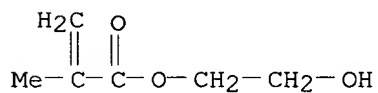
CMF C10 H22 N2



CM 4

CRN 868-77-9

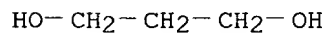
CMF C6 H10 O3



CM 5

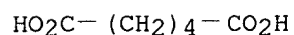
CRN 504-63-2

CMF C3 H8 O2



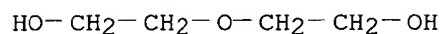
CM 6

CRN 124-04-9  
CMF C6 H10 O4



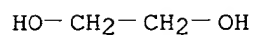
CM 7

CRN 111-46-6  
CMF C4 H10 O3



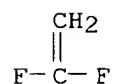
CM 8

CRN 107-21-1  
CMF C2 H6 O2



CM 9

CRN 75-38-7  
CMF C2 H2 F2



L18 ANSWER 7 OF 15; HCAPLUS COPYRIGHT 2002 ACS

AN 1992:593685 HCAPLUS

DN 117:193685

TI Photocurable, fluorine-containing polyurethane acrylate coating compositions

IN Takamatsu, Yukishige; Niimoto, Masaki; Sato, Mitsuo

PA Mitsubishi Rayon K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04093317	A2	19920326	JP 1990-209675	19900808
AB	The title compns. contain .gtoreq.30% compns. prepd. from polyisocyanates, F-contg. diols, and unsatd. alcs. Thus, coating a mixt. of urethane				

acrylate (prepd. from 2 mol 2:1 2,4-diisocyanato-1-methylcyclohexane-diethylene glycol (I) adduct (II) with 1 mol  $\text{H}(\text{CF}_2)_4\text{CH}_2\text{OCH}_2\text{CH}(\text{OH})\text{CH}_2\text{OH}$  and 2 mol 2-hydroxyethyl acrylate (III)) 70, 1,6-hexanediol diacrylate 10, urethane oligomer (prepd. from II 1.2, I 1, and III 0.4 mol) 20, and photoinitiator 3 parts on PVC and curing with UV light gave coatings with good weather and solvent resistance and oil and water repellency.

IT 144025-39-8

RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, photocurable and weather-resistant)

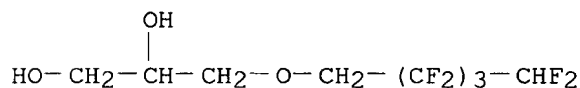
RN 144025-39-8 HCAPLUS

CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with 2,4-diisocyanato-1-methylcyclohexane, 1,2-ethanediol, 2-hydroxypropyl 2-propenoate, 3-[(2,2,3,3,4,4,5,5-octafluoropentyl)oxy]-1,2-propanediol and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 25385-69-7

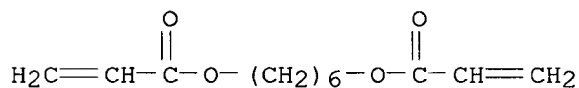
CMF C8 H10 F8 O3



CM 2

CRN 13048-33-4

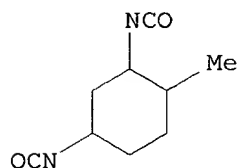
CMF C12 H18 O4



CM 3

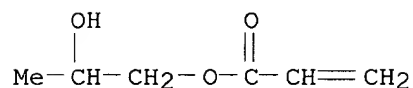
CRN 10581-16-5

CMF C9 H12 N2 O2



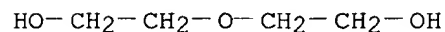
CM 4

CRN 999-61-1  
CMF C6 H10 O3



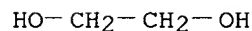
CM 5

CRN 111-46-6  
CMF C4 H10 O3



CM 6

CRN 107-21-1  
CMF C2 H6 O2



L18 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1992:458854 HCAPLUS

DN 117:58854

TI Electrophotographic toners, and manufacture method

IN Inaba, Yoshihiro; Tomita, Kazufumi

PA Fuji Xerox Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03220562	A2	19910927	JP 1990-14805	19900126
	US 5300388	A	19940405	US 1992-908842	19920701
PRAI	JP 1990-14805		19900126		
	US 1991-649005		19910125		

AB Toner particles with surface capable of generation of radicals is coated with copolymers having F-contg. monomer unit and vinylic carboxylic acid monomer units  $\text{H}_2\text{C}:\text{CR}_1\text{CO}_2\text{H}$ ,  $\text{H}_2\text{C}:\text{CR}_1(\text{CH}_2)_n\text{CO}_2\text{H}$ , or  $\text{H}_2\text{C}:\text{CH}(\text{carboxyphenyl})$  ( $\text{R}_1 = \text{H}, \text{Me}; n = 1-8$ ). The toner particles may have encapsulated structure with sheath of polyurea, polyurethane, or these with epoxy groups. The manuf. method involves grafting the toner surface with monomers having .gtoreq.2 radical chain-transferring groups, and further reaction of the grafted toner with the above F-contg. monomer and vinylic carboxylic monomer, or with these and other vinylic monomer. This neg.-  
**charging** toner has sharp **chargeability** durable to mech.

forces, and can be prep'd. without specialized equipments.

IT **139064-44-1**  
RL: USES (Uses)  
(grafted surface of polyurethane-encapsulated particles of electrophotog. toner contg., for stable **chargeability**)

RN 139064-44-1 HCAPLUS

CN Cellulose, 2-hydroxypropyl methyl ether, polymer with 1,3-diisocyanatomethylbenzene, 1,2-ethanediyl bis(2-methyl-2-propenoate), ethenylbenzoic acid, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris[oxirane], Sumidur L and 2,2,2-trifluoroethyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 97709-04-1  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 30551-66-7  
CMF C9 H8 O2  
CCI IDS  
CDES 8:ID

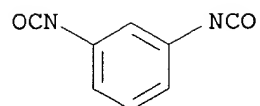


D1-CH=CH<sub>2</sub>

D1-CO<sub>2</sub>H

CM 3

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS  
CDES 8:ID

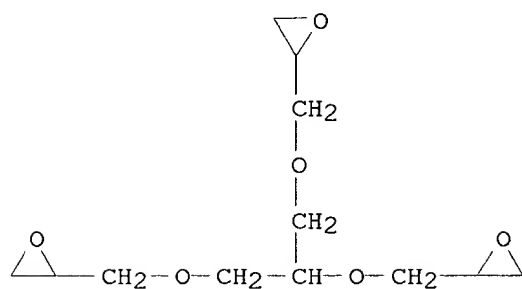


D1-Me

CM 4

CRN 13236-02-7

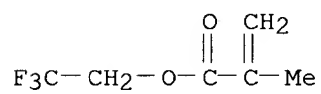
CMF C12 H20 O6



CM 5

CRN 352-87-4

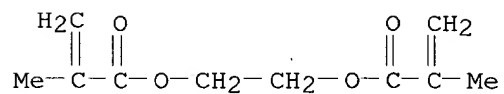
CMF C6 H7 F3 O2



CM 6

CRN 97-90-5

CMF C10 H14 O4



CM 7

CRN 9004-65-3

CMF C3 H8 O2 . x C H4 O . x Unspecified  
CDES 8:GD

CM 8

CRN 9004-34-6  
CMF Unspecified  
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

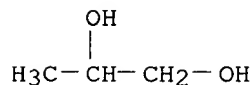
CM 9

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

CM 10

CRN 57-55-6  
CMF C3 H8 O2



L18 ANSWER 9107-15, HCAPLUS COPYRIGHT 2002 ACS

AN 1987:441476 HCAPLUS

DN 107:41476

TI Polyurethanes

IN Tsukano, Tatsuro; Takegawa, Hisao; Midorikawa, Akio; Baba, Toshihiko

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61252220	A2	19861110	JP 1985-93376	19850430
	JP 04026328	B4	19920507		

AB Polyurethanes having pendant perfluoroalkyl groups show excellent toughness, **water** and **oil repellence**, abrasion resistance, and low surface energy. Thus, a 30% DMF soln. of C8F17SO2N(CH2CH2OH)2 (I) 0.15, poly(oxytetramethylene) glycol 0.05, and 1,4-butylene glycol 0.80 equiv was treated with 4,4-diphenylmethane diisocyanate at 1.03:1 ratio NCO/active H at 70.degree. to give a polyurethane having viscosity 100,000 cP, no.-av. mol. wt. 80,000, and F content 11%, forming a film showing tensile strength 810 kg/cm2,



elongation 350%, contact angle 110.degree. (H2O) and 68.degree. (dodecane), and Taber abrasion (after 100 cycles under 100-kg load) 75 mg. with nonblocking surfaces and good dye-mixing property vs. 840 kg/cm2 , 330%, 78.degree., 12.degree., and 250 mg, resp., with highly blocking surfaces and poor dye-mixing, for a polyurethane not contg. I.

IT 109315-87-9

RL: USES (Uses)

(rubber, ~~water~~- and ~~oil-repellent~~,  
abrasion-resistant, with tack-free surfaces)

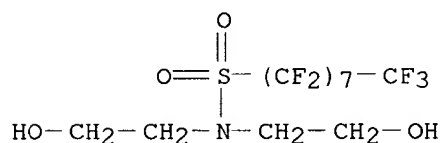
RN 109315-87-9 HCAPLUS

CN 1,4-Butanediol, polymer with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N,N-bis(2-hydroxyethyl)-1-octanesulfonamide, .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)

CM 1

CRN 40630-61-3

CMF C12 H10 F17 N O4 S

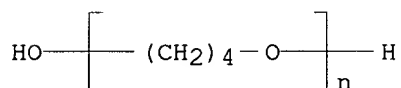


CM 2

CRN 25190-06-1

CMF (C4 H8 O)n H2 O

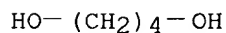
CCI PMS



CM 3

CRN 110-63-4

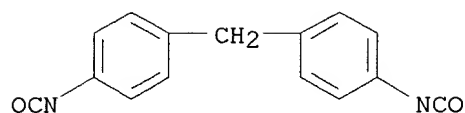
CMF C4 H10 O2



CM 4

CRN 101-68-8

CMF C15 H10 N2 O2



L18 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1985:96926 HCAPLUS

DN 102:96926

TI Polyurethanes containing perfluoroalkyl groups

IN Koemm, Ulrich; Geisler, Klaus

PA Bayer A.-G., Fed. Rep. Ger.

SO Ger. Offen., 24 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3319368	A1	19841129	DE 1983-3319368	19830527
	EP 127061	A2	19841205	EP 1984-105493	19840515
	EP 127061	A3	19860430		
	EP 127061	B1	19880427		
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
	US 4540765	A	19850910	US 1984-612095	19840518
	JP 59226015	A2	19841219	JP 1984-102753	19840523
	JP 04072826	B4	19921119		
PRAI	DE 1983-3319368		19830527		

AB Polyurethanes contg. perfluoroalkyl groups and blocked isocyanate groups are prepd. and used to impart soil, **water**, and **oil repellency** to textiles. Thus, 1175 g C8F17SO2N(C2H4OH)2 in 3200 mL acetone was treated at 56.degree. with 168 g OCN(CH2)6NCO during 30 min, treated after 1 h with 440 g isophorone diisocyanate, cooled after 3 h, and treated with 192 g butanone oxime to give a polyurethane contg. blocked isocyanate groups. A polyamide fabric was treated with the polyurethane and cured 3 min at 150.degree.. The fabric contained 0.1 mg F/g fabric and exhibited **oil** and **water repellency** before and after laundering.

IT 95052-85-0DP, reaction products with butanone oxime and resorcinol

RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. and application to polyamide textiles, for **oil**, soil and **water repellency**)

RN 95052-85-0 HCAPLUS

CN Oxirane, methyl-, polymer with .alpha.,.alpha.'-  
 [[[heptadecafluorooctyl)sulfonyl]imino]di-2,1-ethanediyl]bis[.omega.-  
 hydroxypoly(oxy-1,2-ethanediyl)], 5-isocyanato-1-(isocyanatomethyl)-1,3,3-  
 trimethylcyclohexane, oxirane and 1,1'-(1,1,2,2-tetrafluoro-1,2-  
 ethanediyl)bis[3-isocyanatobenzene] (9CI) (CA INDEX NAME)

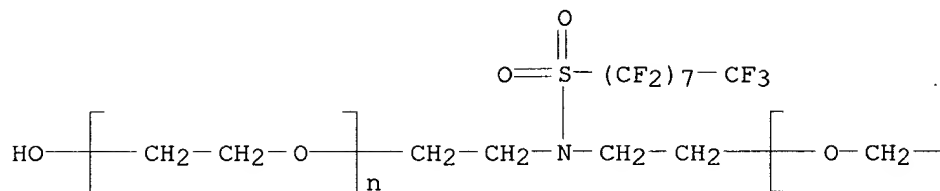
CM 1

CRN 95052-84-9

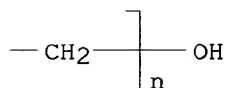
CMF (C2 H4 O)n (C2 H4 O)n C12 H10 F17 N O4 S

CCI PMS

PAGE 1-A



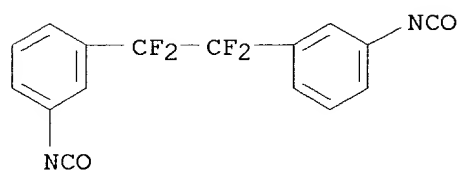
PAGE 1-B



CM 2

CRN 95052-83-8

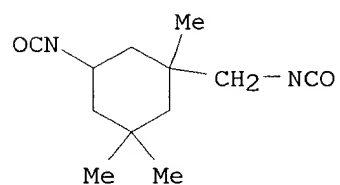
CMF C16 H8 F4 N2 O2



CM 3

CRN 4098-71-9

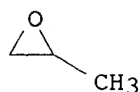
CMF C12 H18 N2 O2



CM 4

CRN 75-56-9

CMF C3 H6 O



CM 5

CRN 75-21-8

CMF C2 H4 O

L18 ANSWER ~~FILED~~ 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1973:467291 HCAPLUS

DN 79:67291

TI Polyesters, alkyd resins, polyurethanes, and epoxy resins

IN LaZerte, James D.; Guenther, Richard A.

PA Minnesota Mining and Manufg. Co.

SO Ger., 6 pp. Division of Ger. 1,240,072 (See Fr. 1,338,904, CA 60;2789c).

CODEN: GWXXAW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1620965	B2	19730517	DE 1966-M68128	19620518
	DE 1620965	C3	19731213		
	FI 40234	B	19680731	FI 1962-1160	19620614
	SE 314670	B	19690915	SE 1962-6874	19620620
	CH 484076	A	19700115	CH 1962-484076	19620621
PRAI	US 1961-136458		19610907		

AB The title polymers, useful in coatings and oilproofing of textiles and leather, are prepd. from polyols contg. perfluoroalkanesulfonamides. Thus, heating N-(2,3-dihydroxypropyl)-N-propylperfluorooctanesulfonamide 86, 2,4-tolylene diisocyanate 48.7, EtOAc 86, and Et3N 0.5 part 2 hr at 60.deg. gives a diadduct. Heating 157.8 parts this compd. and 101.3 parts polypropylene glycol (mol. wt. 2025) at 100.deg. gives N-(2,3-dihydroxypropyl)-N-propylperfluorooctanesulfonamide-polypropylene glycol-2,4-tolylene diisocyanate copolymer (I) [39387-95-6], which remains flexible at -70.deg. and adheres well to metals and glass. Cotton coated with a 0.8% CCl4 soln. of I and cured 10 min at 140.deg. shows H2O-repellency (AATCC 22-1952) 90 and oil repellency 70.

IT 39410-32-7

RL: USES (Uses)

(oil- and water-repellents, for leather and textiles)

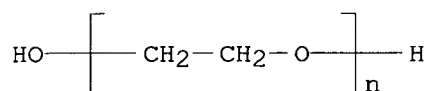
RN 39410-32-7 HCAPLUS

CN 1-Octanesulfonamide, N-(2,3-dihydroxypropyl)-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-propyl-, polymer with 2,4-diisocyanato-1-

methylbenzene and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl)  
(9CI) (CA INDEX NAME)

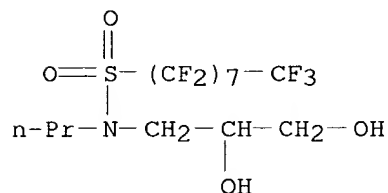
CM 1

CRN 25322-68-3  
CMF (C2 H4 O)n H2 O  
CCI PMS



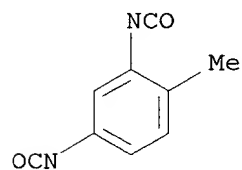
CM 2

CRN 2262-49-9  
CMF C14 H14 F17 N O4 S



CM 3

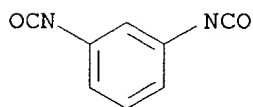
CRN 584-84-9  
CMF C9 H6 N2 O2



L18 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2002 ACS  
AN 1973:443623 HCAPLUS  
DN 79:43623  
TI Treating fibers and fabric with hybrid polymers  
IN Sherman, Patsy O.  
PA Minnesota Mining and Manufg. Co.  
SO U.S., 22 pp. Division of U.S. 3,574,791  
CODEN: USXXAM  
DT Patent  
LA English

FAN.CNT 2

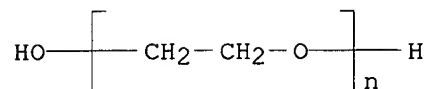
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3728151	A	19730417	US 1970-57884	19700617
	US 3574791	A	19710413	US 1968-698016	19680115
PRAI	US 1967-614925		19670209		
	US 1968-698016		19680115		
AB	Durable water resistance, oily stain resistance, and oily stain removal properties were achieved on resin-finished textiles by treatment with block polymers having oleophobic and hydrophobic properties in air and hydrophilic and oleophobic properties in aq. environments without interfering with the improvements produced by the resins. Thus, 2.5 g 2-[N-ethyl(perfluorooctyl)sulfonamido]ethyl methacrylate and 2.5 g tetraethylene glycol dimethacrylate-H2S prepolymer were polymd. to yield 2-[N-ethyl(perfluorooctyl)sulfonamido]ethyl methacrylate-hydrogen sulfide-tetraethylene glycol dimethacrylate block copolymer [40957-64-0] which was dissolved in methyl isobutyl ketone and padded on a cotton-polyester fabric which had been permanent press-finished with dimethyloldihydroxyethyleneurea to give a fabric with good stain release and repellency after 5 launderings. Numerous other block copolymers were synthesized and used.				
IT	<b>39421-20-0</b>				
	RL: USES (Uses)				
	(block, cellulosic textiles finished by, for improved soil release, soil repellency and waterproofing)				
RN	39421-20-0 HCAPLUS				
CN	2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 1,3-diisocyanatomethylbenzene, 1,2-ethanedithiol and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)				
CM	1				
CRN	26471-62-5				
CMF	C9 H6 N2 O2				
CCI	IDS				
CDES	8:ID				



D1-Me

CM 2

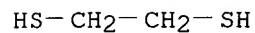
CRN 25322-68-3  
 CMF (C2 H4 O)n H2 O  
 CCI PMS



CM 3

CRN 540-63-6

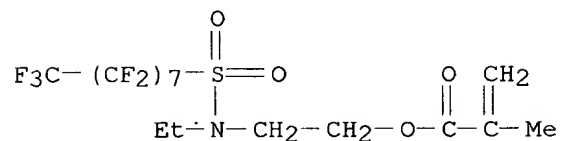
CMF C2 H6 S2



CM 4

CRN 376-14-7

CMF C16 H14 F17 N O4 S

IT **39421-21-1**

RL: USES (Uses)

(block, cellulosic textiles treated with, for improved soil release, soil repelancy and waterproofing)

RN 39421-21-1 HCAPLUS

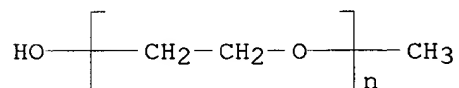
CN 2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2,4-diisocyanatomethylbenzene, 2-hydroxypropyl 2-methyl-2-propenoate and .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

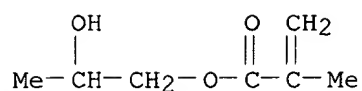
CCI PMS



CM 2

CRN 923-26-2

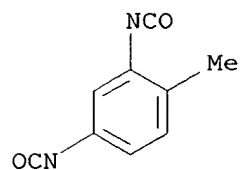
CMF C7 H12 O3



CM 3

CRN 584-84-9

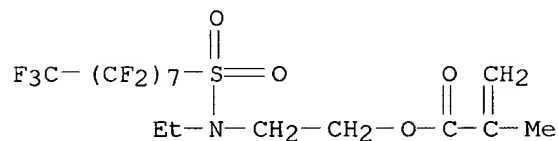
CMF C9 H6 N2 O2



CM 4

CRN 376-14-7

CMF C16 H14 F17 N O4 S



L18 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1972:463292 HCAPLUS  
 DN 77:63292  
 TI Fluoroalkyl polyurethanes for textile finishing  
 IN Hoffmann, Dieter; Schuierer, Erich  
 PA Farbwerke Hoechst A.-G.  
 SO Ger. Offen., 11 pp. Addn. to Ger. Offen. 1,946,955 (CA 75;7360z).  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2101498	B2	19730503	DE 1971-2101498	19710114
	DE 2101498	C3	19731220		
	US 3746742	A	19730717	US 1970-67277	19700826
PRAI	US 1970-67277		19700826		
	DE 1969-1946955		19690917		
AB	The title polymers, e.g. ethyleneimine-polyethylene glycol-1,1,2,2-tetrahydroperfluoro-1-decanol-tolylene diisocyanate copolymer (I) [9050-84-4], used for oil repellent and soil				



release finishing of polyester textiles were manufd. by reaction of ethyleneimine (II)-tolylene diisocyanate(III)-fluoro alc. addn. product with II-III-alc. addn. product in low-boiling inert org. solvents contg. Lewis acids. Thus, reaction of 50 g II-III-polyethylene glycol adduct in Me2CO contg. 0.5 g boron trifluoride-dioxane adduct [19069-34-2] 5 hr at 50.deg. gave I. Impregnation of 50:50% poly(ethylene terephthalate)-cotton fabric with 0.2% I by spraying with I solns. in 1:1 iso-PrOH-CF2ClCFCl2 and fixation for 5 min at 150.deg. gave material of initial **oil repellency** value 110-20.

L18 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1969:525255 HCAPLUS

DN 71:125255

TI Fluorine-containing polyurethanes

IN Katsushima, Atsuo; Hisamoto, Iwao; Fukui, Taneomi; Kato, Takahisa; Nagai, Masayuki

PA Daikin Kogyo Co., Ltd.

SO Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 44020639	B4	19690904	JP	19650712
AB	The title polymers are prepd. by polyimg. F-contg. polyisocyanate or F-free polyisocyanate mixts. therewith with compds. having 1 or >2 active H atoms. Thus, to a mixt. of 0.67 g. ethylenediamine and 2.67 g. water, 100 g. polyester (viscosity 31,500 cp., prepd. from 100 g. Emery-3065-S, 21.5 g. diethylene glycol, and 2.0 g. trimethylolethane) was added, and 161 g. F-contg. diisocyanate [prepd. from an equimol. reaction product of (CF3)2CF(CF2)4CONH(CH2)2OH with OCNCH2CH(NCO)CH2NCO] was added and stirred to give a polyurethane foam. The material thus prepd. had good <b>water</b> and <b>oil repellency</b> , antioxidant properties, and size stability (in 100% humidity for 7 days at 70.degree.).				

IT 25610-62-2P

RL: PREP (Preparation)  
(prepn. of)

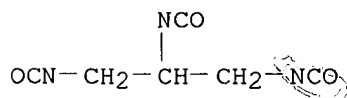
RN 25610-62-2 HCAPLUS

CN Isocyanic acid, 1,2,3-propanetriyl ester, polymer with 1,4-diazabicyclo[2.2.2]octane, diethylene glycol, 2,2,3,3,4,4,5,5,6,7,7,7-dodecafluoro-N-(2-hydroxyethyl)-6-(trifluoromethyl)heptanamide and 2-(hydroxymethyl)-2-methyl-1,3-propanediol (8CI) (CA INDEX NAME)

CM 1

CRN 20015-48-9

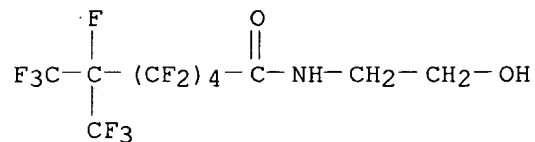
CMF C6 H5 N3 O3



CM 2

CRN 20015-47-8

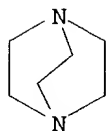
CMF C10 H6 F15 N O2



CM 3

CRN 280-57-9

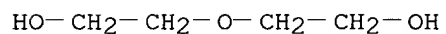
CMF C6 H12 N2



CM 4

CRN 111-46-6

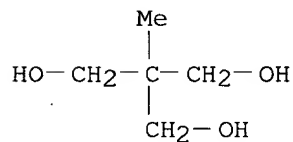
CMF C4 H10 O3



CM 5

CRN 77-85-0

CMF C5 H12 O3



L18 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2002 ACS

AN 1969:512604 HCAPLUS

DN 71:112604

TI .alpha.,.alpha.-difluoroalkylarylmethyl isocyanates

IN Gale, David M.

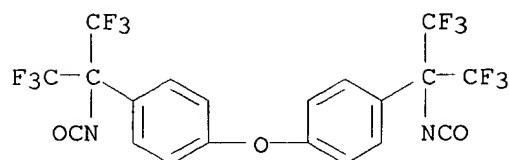
PA du Pont de Nemours, E. I., and Co  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3468924	A	19690923	US 1966-544096	19660421
GI	For diagram(s), see printed CA Issue.				
AB	The title isocyanates (I) are prepd. by treating .alpha.,.alpha.-bis(trifluoromethyl)benzylamines with (COCl) <sub>2</sub> under anhyd. conditions. I are useful in the prepn. of polyurethanes, and as waterproofing agents for paper or cotton fabrics. Thus, a mixt. of C <sub>6</sub> H <sub>6</sub> 25, hexafluoroisopropylidenimine 25, and AlCl <sub>3</sub> 4 g. was heated 8 hrs. at 200.degree. to yield 4.6 g. .alpha., .alpha.-bis(trifluoromethyl)benzylamine (II), b <sub>60</sub> 95.degree.. II (12 g.) was added dropwise over 15 min. into 10.7 g. (COCl) <sub>2</sub> in 20 ml. tetrahydrofuran at 55-65.degree., the soln. refluxed 45 min., excess solvent and (COCl) <sub>2</sub> were removed over 4 hrs. at 1 atm., and the residue was distd. to yield 14% .alpha.,.alpha.-bis(trifluoromethyl)benzyl isocyanate [I (R = H, n = 1)], b <sub>10</sub> 56.degree., n <sub>25D</sub> 1.4192. Similar treatment of 4,4'-oxybis[.alpha.,.alpha.-bis(trifluoromethyl)benzylamine], m. 50-2.degree., b <sub>0</sub> .cntdot.2 124.degree., yielded 65% 4,4'-oxybis[.alpha.,.alpha.-bis(trifluoromethyl)benzyl isocyanate] [I (R = O, n = 2)] (III), b <sub>1</sub> .cntdot.5 140-5.degree.. III was treated with ethylene glycol to yield polyurethane resins that were cast into clear films from HCONMe <sub>2</sub> . Dry filter paper treated with hot III was not wetted by drops of water.				
IT	<b>26937-71-3P</b>				
	RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)				
RN	26937-71-3 HCAPLUS				
CN	Isocyanic acid, oxybis[p-phenylene[trifluoro-1-(trifluoromethyl)ethylidene]] ester, polymer with ethylene glycol (8CI) (CA INDEX NAME)				

CM 1

CRN 23539-82-4

CMF C20 H8 F12 N2 O3



CM 2

CRN 107-21-1

CMF C2 H6 O2

09/592,254

May 16, 2002

